

# Golden Grasslands

## Conservation Opportunity Area



*Greater prairie-chicken numbers have declined since the 1960s, largely due to habitat loss. The Golden Grasslands Conservation Opportunity Area provides large expanses of the open grasslands they prefer.*

Noppadol Paothong

The Golden Grasslands Conservation Opportunity Area (COA) includes two focus areas identified by the Missouri Grasslands Coalition as important landscapes for the recovery of the greater prairie-chicken. The landscape is a combination of existing native prairie habitat, land suitable for grassland restoration and open land suitable for grassland wildlife. Approximately 95 percent of the COA is privately owned.

The Golden - Dorris Creek Focus Area features 22,000 acres of flat to rolling grasslands and crop fields. Residential and commercial development is unlikely in the near future. Crops are grown on approximately 70 percent of the area, primarily in cucumber production. Many landowners welcome financial assistance for

habitat management practices (e.g., removing woody vegetation along fence rows). A prairie restoration of nearly 3,000 acres is feasible near Missouri Prairie Foundation's Golden Prairie.

The Stony Point - Horse Creek Focus Area (28,000 acres) represents one of the best opportunities for private prairie restoration statewide. The landscape supports a significant amount of tallgrass prairie remnants, although much of it has been overseeded with fescue and will require restoration. Fescue, an aggressive invasive grass, crowds out beneficial native prairie plants.

Much of the Golden Grasslands COA also overlaps with newly designated Missouri Department of Conservation Quail Focus Areas.

## Golden Grasslands Conservation Strategies

- Increase the amount of land under permanent conservation protection.
- Implement best management plans for grazing on private lands.
- Implement a prairie idling incentive program to make prescribed fire on overgrazed native fields feasible.
- Develop an incentive program to pay for tree removal costs on private land.
- Replace woody fencerows with native shrubs to benefit animals such as bobwhite quail.
- Construct amphibian breeding sites that mimic bison wallows.
- Control invasive plants and animals (e.g. sericea lespedeza).
- Conduct landowner field days and workshops.
- Establish a grass-fed beef certification program.



Jim Rathert, Missouri Department of Conservation

*Dwindling prairie habitat, and the demise of the creatures that depend on it, sparked the formation of the **Grasslands Coalition** in 1998. The Coalition works to help the public understand the importance of grasslands and focuses on improving grassland habitat in areas that could make a significant and lasting difference to species like the prairie-chicken.*

### Priority Research and Inventory Needs

- Determine the best long-term methods for controlling sericea lespedeza.
- Evaluate patch-burn grazing techniques.
- Inventory the distribution and abundance of native prairie plants.

### Conservation Partners

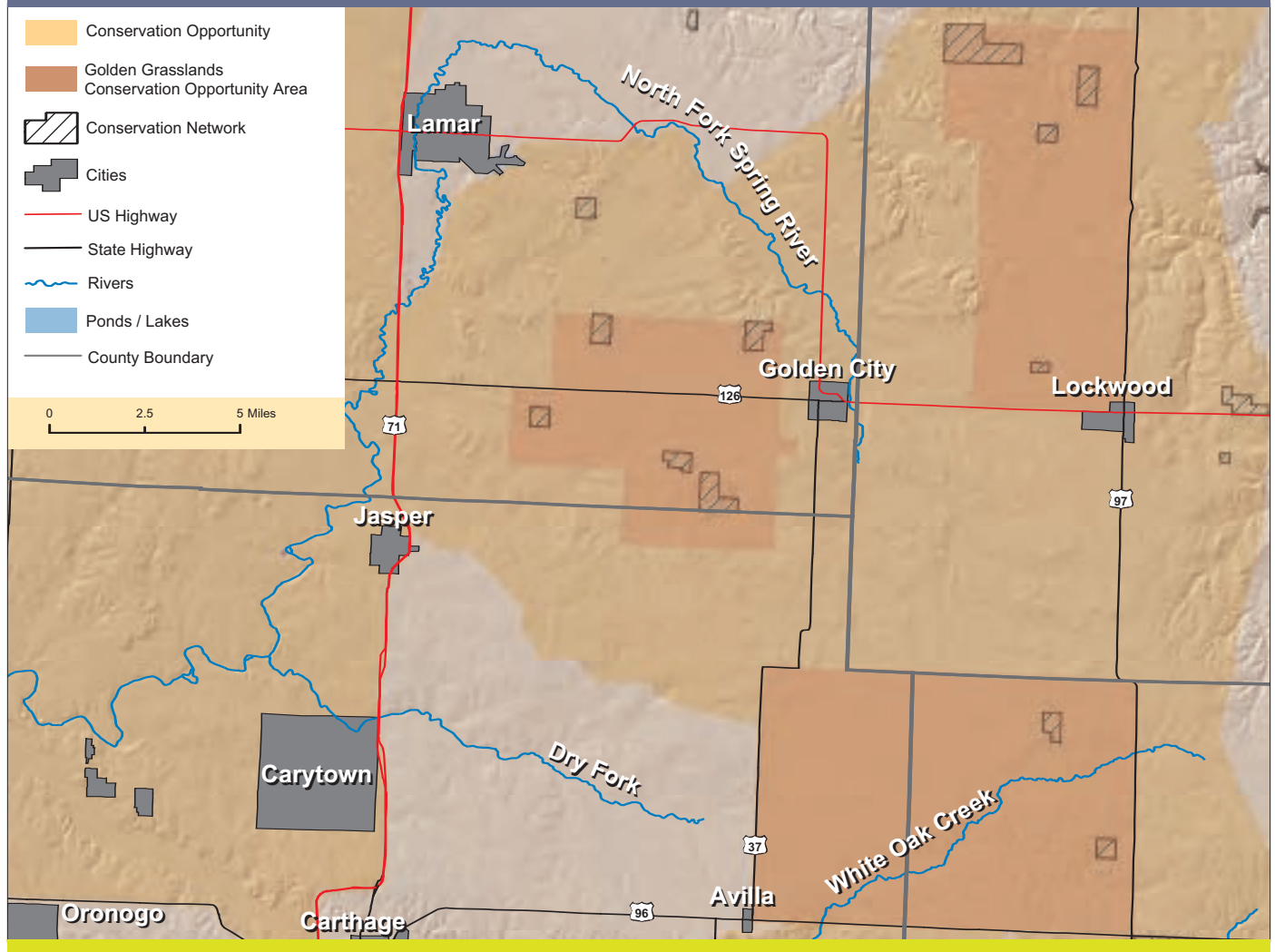
**Existing:** Missouri Prairie Foundation (MPF); The Nature Conservancy – Missouri Chapter (TNC); Natural Resources Conservation Service (NRCS); U.S. Fish and Wildlife Service (USFWS); Missouri Department of Conservation (MDC)

**Potential:** Audubon Missouri; National Wild Turkey Federation; Ozark Regional Land Trust; Quail Unlimited (QU); private landowners



Jim Rathert, Missouri Department of Conservation

## Golden Grasslands Conservation Opportunity Area



### Funding Sources

**Existing:** TNC annual budget; MPF annual budget; MDC annual budget; MDC Private Lands Cost Share Program; MDC Wildlife Diversity Funds; National Fish and Wildlife Foundation Grant; Missouri Bird Conservation Initiative Grant; NRCS Grassland Reserve Program; USFWS Partners for Fish and Wildlife; USFWS Private Stewardship Program

**Promising Future Sources:** QU Quail Habitat Incentive funds; NRCS Farmland Protection Program; MDC State Wildlife Grants; MDC Landowner Incentive Program

### Existing Conservation Network

Golden Prairie; Dorris Creek Conservation Area; Horse Creek Prairie Conservation Area; Indigo Prairie Conservation Area; Niawathe Prairie Conservation Area and Natural Area; Pa Sole Prairie Conservation Area; Providence Prairie Conservation Area; Kickapoo Prairie Conservation Area; Sloan Conservation Area; Stony Point Prairie Conservation Area; Talbot Conservation Area; Treaty Line Prairie Conservation Area; Cook Meadow; Penn-Sylvania Prairie

*The pale purple coneflower (left) is a characteristic prairie plant. The showy flowers produced throughout the summer are a good nectar source for butterflies. Insects do much of the work on the prairie: they are important pollinators, help build soil by cycling nutrients and provide food for birds and other animals.*



## Prairie Sunrise



*The diversity of grassland wildlife has diminished as prairie habitats have been converted to cropland or fescue. Native tallgrass prairies once covered 34 percent of Missouri but now occupy less than 0.5 percent of the land. The rarity of our remaining prairies makes the efforts to protect them all the more valuable.*

Jim Rathert, Missouri Department of Conservation

## Conservation Challenges

Golden Grasslands remains one of the last places in Missouri to find greater prairie-chickens. Obstacles to securing their local populations include high land prices and fluctuating commodity prices, low levels of public

understanding about prairie habitat and native grassland management, lack of funding for existing programs, conflicting program rules, constant change in rules and goals of conservation programs and lack of available staff time.

To learn more about the Golden Grasslands Conservation Opportunity Area, please contact:

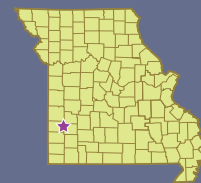


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# Golden Grasslands

Conservation Opportunity Area

Golden Prairie Grassland Connectivity Initiative



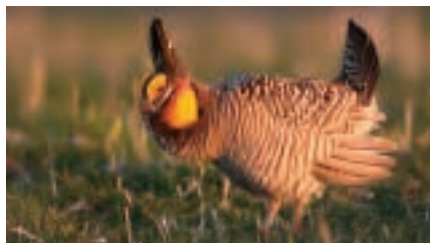
Ozark  
Highlands



Scissor-tailed Flycatcher



Bullsnake



Greater Prairie-chicken



Mead's Milkweed

The privately owned land near Missouri Prairie Foundation's Golden Prairie and The Nature Conservancy's Shelton Cook Memorial Meadow vicinity is a patchwork of native prairie, cool-season grasslands and cropland. The area is home to one of the last remaining populations of greater prairie-chickens in Missouri. Prairie-chickens need open country that is dominated by grasslands. Habitat fragmentation has reduced greater prairie-chickens in this area to less than 100 birds.

The Golden Prairie Grasslands Connectivity Initiative will work with willing private landowners to restore wildlife habitat and reduce fragmentation. Approximately 1,500 acres of restorable remnant prairies occur within the project area. Appropriate management techniques include removing trees from prairie soils, converting fescue fields to warm-season forage grasses and increasing the amount of native grasses and wildflowers.









**Habitat fragmentation.** The breaking up of a habitats into smaller, unconnected pieces; often due to human development, agriculture, etc.

**Connectivity.** In areas with habitat fragmentation, increasing the quality of habitat between patches of remaining high-quality natural communities. For example, native pastures for grazing may be effective bridges between prairie hay meadows.

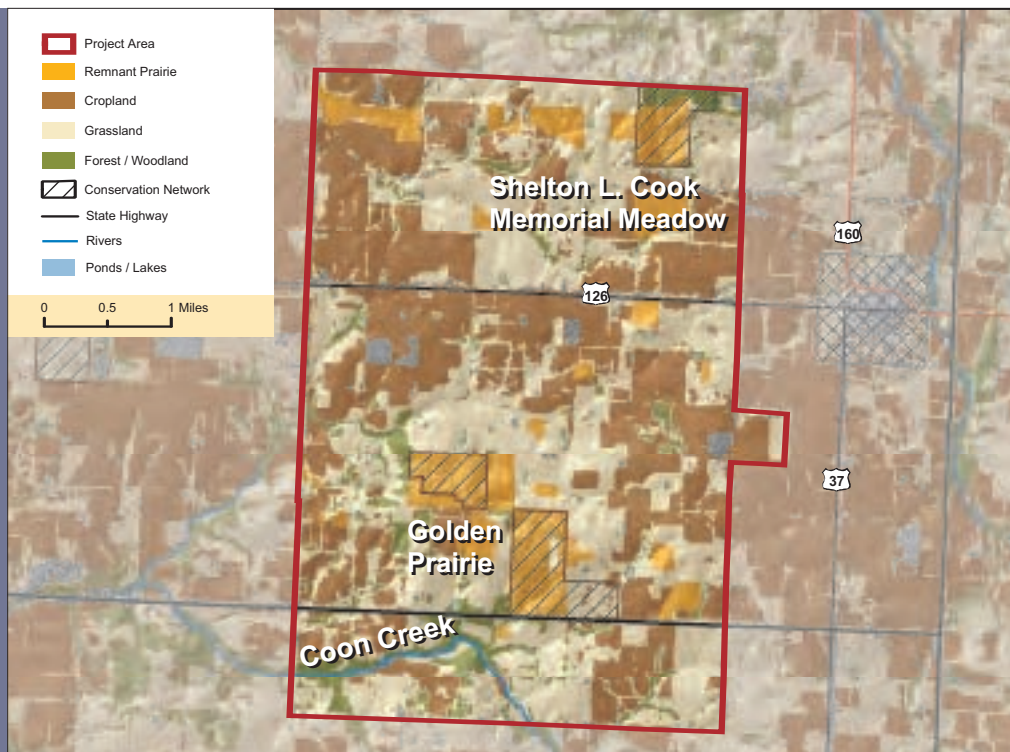
Landscape	Community	Species
Native prairie/ warm-season grassland complexes	Dry-mesic chert prairie, Dry-mesic limestone/dolomite prairie, Dry-mesic sandstone/shale prairie, Hardpan prairie, Prairie swale	Mead's Milkweed, Oklahoma Sedge, Wolf's Spike Rush, Prairie Mole Cricket, Regal Fritillary, Grassland Crayfish, Northern Crawfish Frog, Slender Glass Lizard, Bullsnake, Ornate Box Turtle, Bell's Vireo, Dickcissel, Eastern Meadowlark, Grasshopper Sparrow, Greater prairie-chicken, Henslow's Sparrow, Loggerhead Shrike, Scissor-tailed Flycatcher, Swainson's Hawk, Upland Sandpiper, Prairie Vole, Hispid Cotton Rat

## Strategic Conservation Goal:

Build connectivity for grassland wildlife by promoting conservation actions on 5,000 acres of private land and the existing conservation network.

-  Project Area
-  Remnant Prairie
-  Cropland
-  Grassland
-  Forest / Woodland
-  Conservation Network
-  State Highway
-  Rivers
-  Ponds / Lakes

0 0.5 1 Miles



Desired Change	Proposed Monitoring
↓ Decreased amount of trees on prairie soils	Periodic assessment of land cover using satellite imagery or aerial photography
↑ Increased acres of prescribed fire management and patch-burn grazing	Acres benefited as reported by MDC Private Lands program monitoring
↓ Decreased acres of grassland dominated by fescue	Periodic assessment of land cover using satellite imagery or aerial photography
↑ Increased acres of cropland restored to native grasses and prairie forbs	Periodic assessment of land cover using satellite imagery or aerial photography
↓ Declining amount of sericea lespedeza due to active control methods	Field visits and regular site evaluations
↑ Improved native plant community composition on remnant prairies	Vegetation sampling to detect changes in conservative prairie plants at 3-year intervals
↑ Increasing numbers of prairie-chickens	Population trend of prairie-chickens annually

To learn more about the Golden Prairie Grassland Connectivity Initiative, please contact:



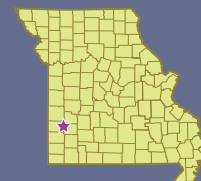
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# Golden Grasslands

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## Stony Point Grassland & Shrubland Restoration Initiative



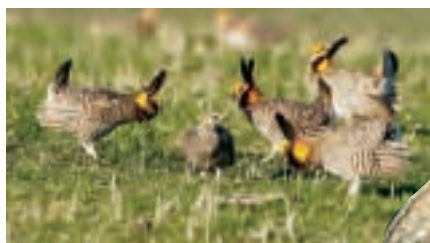
Ozark  
Highlands



*Henslow's Sparrow*



*Regal Fritillary*



*Greater Prairie-chickens*

**B**road, flat prairies and scattered savannas once dominated the Stony Point project area. Today, the landscape contains a mixture of fescue pastures, hay meadows and crop fields with timber scattered on the roughest lands. Over 4,000 acres of restorable remnant prairies and savannas remain in the Stony Point project area. The Missouri Department of Conservation recently designated this landscape a Quail Focus Area. The Department and quail conservation partners are committing more resources to the area for grassland, shrubland and savanna habitat restoration.

The Stony Point Grassland and Shrubland Restoration Initiative will work with willing private landowners to improve wildlife habitat and restore prairie and savanna natural communities. Appropriate management techniques include prescribed burns, fescue-field conversions to native plants and implementing grazing systems that are wildlife-friendly.

**Prairie.** A habitat dominated by grasses and wildflowers with scattered shrubs and very few trees.

**Savanna.** Grasslands with widely scattered trees and shrubs; sparsely timbered areas associated with prairies. Shrubs are a significant part of some savanna landscapes. When dominated by low woody plants, it may be called a shrubland.

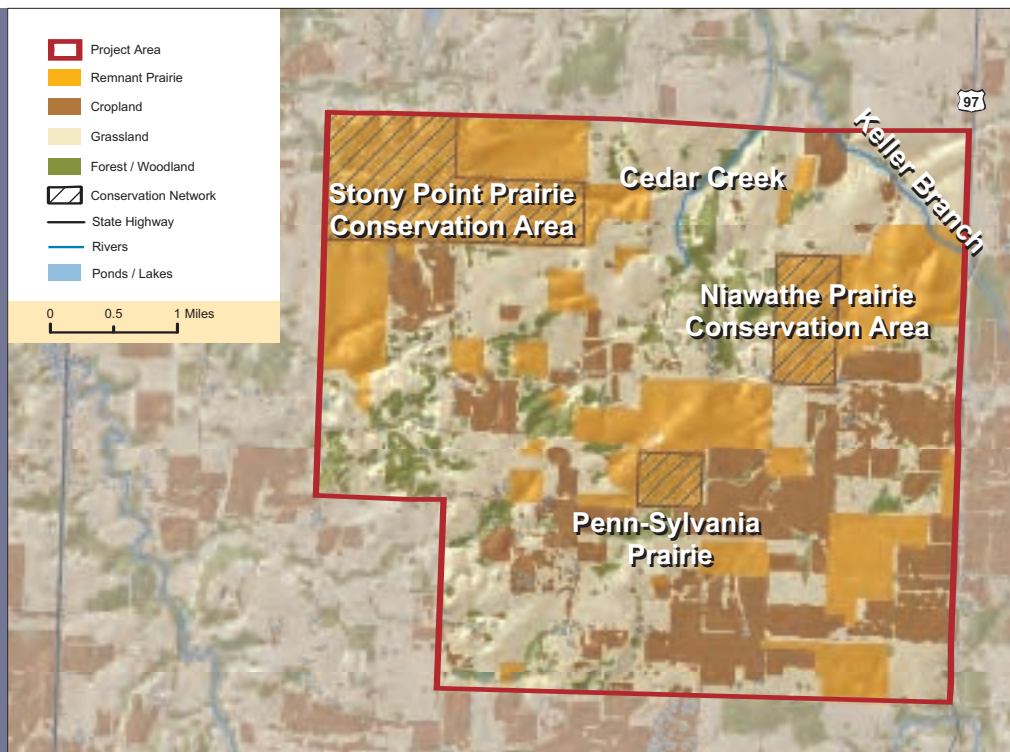


*Northern Bobwhite*

Landscape	Community	Species
Native prairie and warm-season grassland complexes with savanna and shrub components	Dry-mesic sandstone/shale prairie, Hardpan prairie	Mead's Milkweed, Prairie Mole Cricket, Regal Fritillary, Grassland Crayfish, Great Plains Narrow-mouthed Toad, Northern Crawfish Frog, Bullsnake, Ornate Box Turtle, Bell's Vireo, Dickcissel, Eastern Meadowlark, Grasshopper Sparrow, Greater prairie-chicken, Henslow's Sparrow, Loggerhead Shrike, Scissor-tailed Flycatcher, Swainson's Hawk, Upland Sandpiper, Prairie Vole, Hispid Cotton Rat
	Limestone/dolomite savanna, Sandstone savanna	Eastern Tiger Salamander, Broad-headed Skink, Northern Fence Lizard, Three-toed Box Turtle, Blue-winged Warbler, Brown Thrasher, Field Sparrow, Harris's Sparrow, Northern Bobwhite; Prairie Warbler

## Strategic Conservation Goal:

Build connectivity for grassland and shrubland wildlife by promoting conservation actions on 5,000 acres of private land and the existing conservation network.



Desired Change	Proposed Monitoring
↓ Decreased amount of trees on prairie soils	Periodic assessment of land cover using satellite imagery or aerial photography
↑ Increased acres of prescribed fire management and patch-burn grazing	Acres benefited as reported by MDC Private Lands program monitoring
↓ Decreased acres of grassland dominated by fescue	Periodic assessment of land cover using satellite imagery or aerial photography
↑ Increased acres of cropland restored to native grasses and prairie forbs	Periodic assessment of land cover using satellite imagery or aerial photography
↓ Declining amount of sericea lespedeza due to active control methods	Field visits and regular site evaluations
↑ Improved native plant community composition on remnant prairies	Vegetation sampling to detect changes in conservative prairie plants at 3-year intervals
↑ Increasing numbers of prairie-chickens	Population trend of prairie-chickens annually
↑ Increasing populations of northern bobwhite quail	Population trend using annual quail monitoring data

To learn more about the Stony Point Grassland and Shrubland Restoration Initiative, please contact:

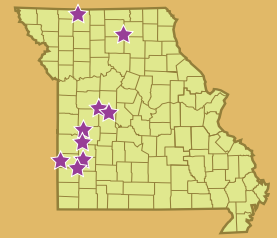


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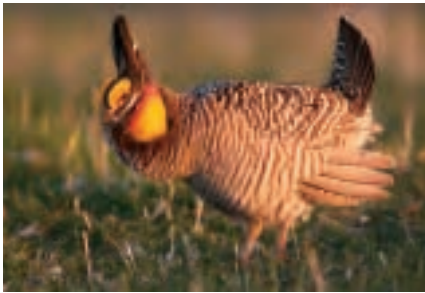


# Greater Prairie-Chicken

## Recovery Initiative



Grasslands Coalition  
Focus Areas



Greater Prairie-chicken



Prairie-chicken Lek



Native Prairie

As a result of continuing population declines throughout the state, the Missouri Department of Conservation (MDC) added the greater prairie-chicken to Missouri's endangered species list in 1999.

Greater prairie-chickens once thrived on the vast tracts of open grassland that blanketed a third of the state. Now just a fraction of a percent of native prairie remains. The greater prairie-chicken is just one of many prairie species imperiled by the loss of tallgrass prairie habitats.

The key to conserving prairie-chickens and other tallgrass prairie species is cooperative land management across prairie landscapes. Conservation at the scale needed will necessarily involve many partners, including the residents of Missouri communities that share a common geography with remnant tallgrass prairie habitats and the remaining prairie-chicken populations.

The Grasslands Coalition, a public/private partnership committed to the conservation of Missouri's native grasslands, is refocusing conservation attention on recovering this symbol of healthy tallgrass prairie ecosystems.

Working together, we can recover the prairie-chicken in Missouri. The Grasslands Coalition invites your input and participation in this conservation project.

**Recovery Goal:** Remove greater prairie-chickens from the state's endangered species list.

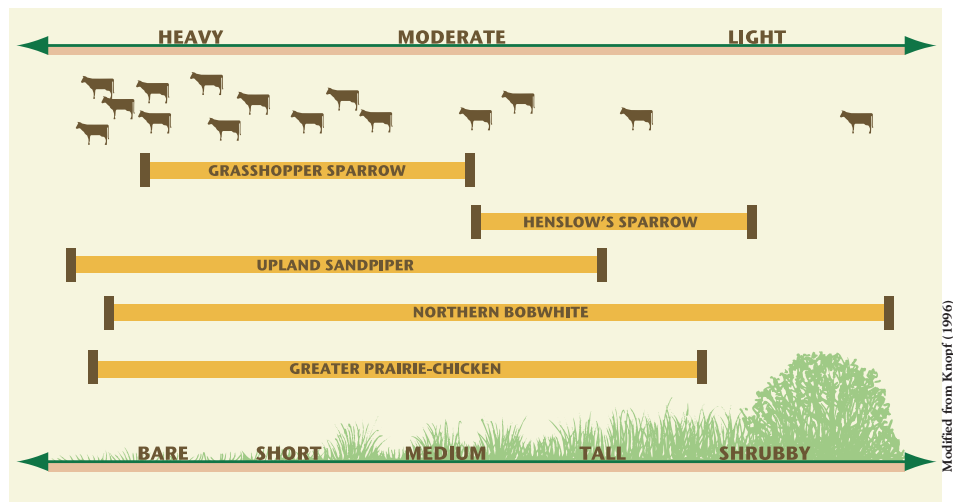
- Recovery will be considered accomplished when Missouri has a statewide population of at least 3,000 birds throughout the Grasslands Coalition Focus Areas for 10 years.

**Grassland Habitat Goal:** Each prairie-chicken population will require a minimum of 4,000 acres of grassland habitat within a 10,000 acre landscape.

- The 4,000 acres of managed grassland bird habitat should include a protected 2,000 acre core centered on prairie chicken leks and scattered tracts making up the remaining 2,000 acres. At least half of these scattered tracts should be greater than 100 acres.

Targeted Landscape	Targeted Species
Native prairie/wildlife friendly grassland complexes	Greater Prairie-chicken, Grasshopper Sparrow, Henslow's Sparrow, Upland Sandpiper
Other Species that will Benefit	
Eastern Prairie Fringed Orchid, Western Prairie Fringed Orchid, Oklahoma Sedge, <i>Carex bicknellii</i> , <i>Carex missouriensis</i> , <i>Carex opaca</i> , Wolf's Spike Rush, Mead's Milkweed, American Burying Beetle, Prairie Mole Cricket, Regal Fritillary, Grassland Crayfish, Northern Crawfish Frog, Slender Glass Lizard, Bullsnake, Ornate Box Turtle, Topeka Shiner, Bobolink, Bell's Vireo, Scissor-tailed Flycatcher, Dickcissel, Eastern Meadowlark, Northern Harrier, Sedge Wren, Loggerhead Shrike, Swainson's Hawk, Hispid Cotton Rat, Prairie Vole, Black-tailed Jack Rabbit	

Grassland birds require a wide variety of plant heights and densities ranging from bare ground to tall grasses. One method used to produce this structural diversity in grasslands is called patch burn grazing. Patch burn grazing mimics the historical interaction of two ecological processes that shaped native prairies—fire and grazing. Each year a third of the pasture is burned. The lush regrowth focuses grazing within the burned area. The burned unit shifts from year to year, providing varied structure throughout the managed area.



Desired Change	Proposed Monitoring
↑ Increasing numbers of prairie-chickens	Population survey of prairie-chickens annually
↓ Decreased fragmentation in prairie landscapes	Periodic assessment of land cover using satellite imagery or aerial photography
↑ Increased acres of prescribed fire management, rest-rotation and patch-burn grazing	Acres benefited as reported by MDC Private Lands program monitoring
↓ Decreased acres of grassland dominated by fescue	Periodic assessment of land cover using satellite imagery or aerial photography/ground truthing
↑ Increased acres of cropland restored to native grasses and prairie forbs or wildlife friendly grasses	Periodic assessment of land cover using satellite imagery or aerial photography
↓ Declining amount of sericea lespedeza due to active control methods	Field visits and regular site evaluations
↑ Improved native plant community composition on remnant prairies	Vegetation sampling to detect changes in conservative prairie plants at 3-year intervals
↑ Increased community awareness and involvement in prairie conservation	Human dimensions survey and workshops

*This initiative represents just one aspect of tallgrass prairie conservation. The Grasslands Coalition seeks long-term protection of prairie landscapes including the full array of native natural communities and species.*

To learn more, please contact:



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